HELVETICA PHYSICA ACTA

VOLUMEN 67, 1994

CONTENTS – INHALTSVERZEICHNIS – TABLE DES MATIÈRES

Fascicle 1
31. 3. 1994

Helffer, B., Sjöstrand, J.: Erratum on the Paper Helv. Phys. Acta 65 (1992) 748: Semiclassical Expansions of the Thermodynamic Limit for a Schrödinger Equation. II. The Double Well Case. 1
Sewell, G. L.: Quantum Plasma Model with Hydrodynamical Phase Transition . . . 4
Newton, R. G.: Comment on "Normalization of Scattering States, Scattering Phase Shifts, and Levinson Theorem" by N. Poliatzky [Helv. Phys. Acta 66, 241-263 (1993)] 20
Emery, S., Piguet, O.: Symmetries on the Chern-Simons Theory in the Axial Gauge, Manifold with Boundary 22
Chayes, L., Klein, D.: A Generalization of Poisson Convergence to "Gibbs Convergence" with Applications to Statistical Mechanics 30
Brydges, D. C., Keller, G.: Correlation Functions of General Observables in Dipole-Type Systems I: Accurate Upper Bounds 43

Fascicle 2
16. 5. 1994

Ivanov, A.: On the Covering Property in Physical Theories 117
Aaberge, T.: On the Size of the State-Space for Systems of Quantum Particles with Spin 127
Al-Naggar, I., Pearson, D.B.: A New Asymptotic Condition for Absolutely Continuous Spectrum of the Sturm-Liouville Operator on the Half-Line 144
Boutet de Monvel-Berthier, A., Purice, R.: The Dirac Evolution Equation in the Presence of an Electromagnetic Wave 167
Zapatrin, R. R.: Quantum Logic without Negation 188
Danilov, A. V., Kubatkin, S. E., Landau, I. L., Parshin, I. A., Rinderer, L.: Insulating Phase of Mercury in Cold-Deposited Films 203
Elmer, F. J.: Spin-Wave Patterns and Spin-Wave Turbulence 205
Soares, V., Houch, D., Rinderer, L.: Freezing of Supercooled Refractory Metals . 207
Castro, H., Fluckiger, B., Loude, J.-F., Holguin, E., Rinderer, L.: The Exponential Critical State of High-Tc Ceramics 209
Kafader, U., Sirringhaus, H., Ramm, J., Dommann, A., von Känel, H.: *In Situ* DC-Hydrogen Plasma Cleaning of Si(111) Surfaces 211

Elmer, F. J.: Nonlinear Dynamics of Atomic Force Microscopes 213
Grütter, Ch., Trittibach, R., Bilgram, J. H.: Surface Melting of Gallium Single Crystals 215
Schaer, S. F.: Coaxial Plasma Gun in the High Density Regime and Injection into a Helical Field 217
Mi, J., Letourneau, P., Ganière, J.-D., Gailhanou, M., Dutoit, M., Dubois, C., Dupuy, J. C., Brémond, G.: Improvement of Crystal Quality of Epitaxial Silicon-Germanium Alloy Layers by Carbon Additions 219
Spring, R., Lüthy, W., Weber, H. P.: Individual Holographic Optical Element for Output-Emission Improvement of a Diode-Laser Array 221
Bopp, M. A., Tarrach, G., Meixner, A. J., Zschokke-Gränacher, I.: Abbildung einer stehenden evaneszenten Welle mit optischer Nahfeld-Mikroskopie 223
Palberg, T., Mönch, W., Bitzer, F., Leiderer, P., Belloni, L., Bellini, T., Piazza, R.: Charge Dependent Freezing Line of Yukawa Suspensions 225
Cavaco, C., Schurtenberger, P.: Dynamics of Giant Polymer-Like Microemulsions . 227
Kallenbach, R., Wurz, P., Gubler, L., Gonin, M., Bochsler, P.: 360° Panoramic View Isochronous Time-of-Flight Mass Spectrometer 229
Eliasson, B., Killer, E.: Hydrogenation of CO2 231
Egelhaaf, S. U., Bauer, H. H, Merkle, H. P., Schurtenberger, P.: Understanding Problems from 'Real Life' with Complex Flluid Physics: Biocolloid Stability and Aggregation 233
Reimann, P.: Stabilization of Transient Chaos by Noise 235

Fascicle 3
30. 6. 1994

Daumer, F.: Equations de Hartree-Fock dans l'Approximation du Tight-Binding . . 237
Salmhofer, M.: Lee-Yang Measures 257
Moritsch, O., Schweda, M.: On the Algebaic Structure of Gravity with Torsion including Weyl Symmetry 289

Fascicle 4
31. 8. 1994

Yee, K.: Monopoles and Quark Confinement 345
Colatto, L. P.: Some Remarks on the Algebra of Supercharges in D=(1+2) 357
Gangopadhyaya, A., Panigrahi, P. K., Sukhatme, U. P.: Inter-Relations of Solvable Potentials 363
Goudsmit, P. F. A., Leisi, H. J., Matsinos, E.: The Low-Energy Pion-Nucleon Interaction 369
Barut, A. O., Moore, D. J., Piron, C.: Spacetime Models from the Electromagnetic Field 392
Baleanu, D.: Spinning Particles in the Euclidean Taub-Nut Space 405
Teitelman, M.: Spin-Wave-Spin-Wave Interaction and the Thermodynamics of the Heisenberg Spin Chain 419

Kraus, E.: Asymptotic Normalization Properties and Mass Independent Renormalization Group Functions 424
Isar, A.: The Harmonic Oscillator with Dissipation within the Theory of Open Quantum Systems 436

Fascicle 5
30. 9. 1994

Quiros, M.: Field Theory at Finite Temperature and Phase Transitions 451

Fascicle 6
29. 10. 1994

Gerisch, T.: Local Perturbations and Limiting Gibbs States of Quantum Lattice Mean-Field Systems 585
Khvedelidze, A., Pervushin, V.: Zero Modes of Gauss'Constraint in Gaugeless Reduction of Yang – Mills Theory 610
Bonanno, A., Droz, S., Israel, W., Morsink, S. M.: Black Holes: the Inside Story . 626
Bacry, H.: La non-localisabilité du photon, Clef de voûte d'une refonte de la physique 632
Fassari, S., Inglese, G.: On the Spectrum of the Harmonic Oscillator with a δ-Type Perturbation 650
Triantaphyllou, G.: A New Paradigm for the Fermion Generations 660
Poliatzky, N.: Normalization of Scattering States and Levinson's Theorem: Reply to a Comment by R.G. Newton [Helv. Phys. Acta 67, 2 (1994)] 683

Fascicle 7
16. 12. 1994

Tashkova, M., Donev, S.: On the Relativistic Tunneling and Above Barrier Transmission in Some One-Dimensional Structured Barrier Systems 691
Ferrari, F.: Gauge Field Theories on Riemann Surfaces 702
Joos, H., Azakov, S. I.: The Geometric Schwinger Model on the Torus II 723
Poberii, E. A.: Nonmetricity Driven Inflation 745
Lüthi, R., Meyer, E., Haefke, H., Howald, L., Güntherodt, H.J.: Nanosled Experiments: Determination of Dissipation and Cohesive Energies of C60 with UHV-SFM 755
Eng, L. M., Küpfer, M., Seuret, Ch., Günther, P.: Second-Harmonic Studies of Pure DCANP and Mixed DCANP/CdA LB Films at the Air/Water Interface . . . 757
Hild, S., Gutmannsbauer, W., Lüthi, R., Haefke, H., Güntherodt, H.-J.: Morphological Changes During Stretching of Polypropylene Films Studied by Scanning Force Microscopy 759
Meier, J., Blondel, A., Doudin, B., Ansermet, J.-Ph.: Magnetic Properties of Nanosized Wires 761
Stoll, E. P., Baratoff, A., Mangili, A., Maric, D.: Atom and Electron Motions on the Si(001) Surface Generated by First Principles Molecular Dynamics 763

Ammann, C.: Etude de Microréseaux Supraconducteurs 765
Liviotti, E.: Transmission through One-Dimensional Periodic Media 767
Gerteisen, E. A., Egli, W., Eliasson, B.: Vorticity Formation in an Electrostatic Precipitator 769
Hirt, A., Duval, B. P., Moret, J.-M., Pochelon, A., Tonetti, G., Weisen, H.: MHD Activity During H-Mode Discharges on the TCV Tokamak 771
Robadey, J., Marti, U., Filipowitz, F., Hessler, T., Martin, D., Morier-Genoud, F., Silva, P. C., Magnenat, Y., Reinhart, F. K., Jouneau, P.-H., Bobard, F.: Characterization of High Density Arrays of Quantum Wires by Photoluminescence and TEM 773
Filipowitz, F., Marti, U., Robadey, J., Martin, D., Morier-Genoud, F., Silva, P. C., Magnenat I., Ruterana, P., Jouneau, P.-H., Bobard, F., Reinhart, F. K.: Fabrication and Characterization of Quantum Wires in Optical Waveguide Structures . 775
Conti, D., Bodek, K., Kayser, H. K., Lang, J., Navert, S., Naviliat, O., Reichert, E., Sromicki, J., Steffens, K.-H., Steigerwald, M., Stephan, E., Zejma, J.: Spin Dependence in Scattering of 14 MEV Electrons From Lead Nuclei 777
Piller, C., Huot, O., Jacot-Guillarmod, R., Mulhauser, F., Schaller, L. A., Schellenberg, L., Schneuwly, H., Tresch, S., Thalmann, Y.-A., Werthmüller, A.: Muon Transfer Rates to Helium in H2 + He + Ar Gas Mixtures: A New Evaluation . . 779
Thalmann, Y.-A., Huot, O., Jacot-Guillarmod, R., Mulhauser, F., Piller, C., Schaller, L. A., Schellenberg, L., Schneuwly, H., Tresch, S., Werthmüller, A.: Muon Capture Ratios in Ar + Ne Mixtures 781
Werthmüller, A., Huot, O., Jacot-Guillarmod, R., Mulhauser, F., Piller, C., Schaller, L. A., Schellenberg, L., Schneuwly, H., Thalmann, Y.-A., Tresch, S.: Muon Transfer Rates from Thermalized μp and μd Atoms to Oxygen 783

Fascicle 8
15. 2. 1995

Sen, D., Basu, A. N., Sengupta, S.: Bohr's Complementarity Principle – Its Relation to Quantum Mechanics 785
Degiovanni, P.: Equations de Moore et Seiberg, Théories Topologiques et Théorie de Galois 799
Khuri, R.R.: Black Holes and Solitons in String Theory 884
Fierz, M., Fierz, M.: Zur Genauigkeit von Newtons Messung Seiner Interferenzringe 923
Bonneau, G.: B.R.S. Renormalization of Some On-Shell Closed Algebras of Symmetry Transformations. The Example of Supersymmetric Non-Linear σ Models: 1) The N = 1 Case 930
Bonneau, G.: B.R.S. Renormalization of Some On-Shell Closed Algebras of Symmetry Transformations: 2) N=2 and 4 Supersymmetric Non-Linear σ Models . . 954